Risk and harm on the internet

CHAPTER 8

Risk and Harm on the Internet

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The Internet at Home and School: What's New?

The speed with which children and families are gaining access to new media technologies today has not been experienced before in the history of technological innovation. Not only are people in many parts of the world acquiring, learning to use, and finding a purpose for the Internet in their daily lives, but it seems that everyday practices of communication, education, entertainment, commerce, and participation are being rewritten through the use of online digital technologies, especially mobile and social media. Moreover, children and young people have tended to lead in this effort to get online, resulting in claims that these "digital natives" (Helsper & Eynon, 2010) are gaining skills and opportunities little understood by those traditionally tasked with supporting them and keeping them safe. Often having to play catch-up with both innovative youth and the continually changing technology, diverse stakeholders—governments, schools, industry, child welfare groups, and civil society—seek to maximize online opportunities while minimizing the risk of harm associated with Internet use. All this poses some fascinating challenges for families, for the wider society—and for research. How do children gain access to and experience new media, especially the Internet, in their home, school, and community? Does the reconfiguring of identity, knowledge, social relations, and intimacy afford children more risks than opportunities? What are the priorities and the dilemmas for governments, for educators, for industry, and even for individuals? In this chapter, I reflect on the emerging patterns of findings from research, focusing the thorny and often misunderstood question of the relation between risk and harm.

A starting point is the hotly contested agenda of questions debated in the public domain, strongly focused on values and social change. This agenda tends to articulate a technologically determinist perspective in which new technological

developments are framed as a potentially transformative influence entering into an otherwise stable social reality. Sometimes this is optimistic—suggesting that Internet access at school can motivate children to learn, that civic websites will reinvigorate apathetic youth, or that the World Wide Web enhances children's knowledge in ways that libraries never managed to do. However, although techno-optimism is strong, in relation to children it is the anxieties, even moral panics, that dominate the agenda—just as they always have in the history of new media. Public pronouncements in the media, government, and everyday discourse are supremely technologically determinist in their vision of the Internet as a corrupter of innocence, disrupting traditional authority relations between adults and children. Hence the media headlines convey worry that the Internet is now raising our children, that social networking sites have undermined children's sense of privacy, that mobile media bring pedophiles into the child's bedroom, and so on. The result is that many parents are anxious about their children's online activities, and schools have often banned the use of social or mobile media on the premises, thereby directly undermining society's hopes for e-learning and new forms of engagement. Such anxieties in turn fuel calls to governments to regulate the internet industry, although until just a decade ago, the Internet was commonly likened to a virtual Wild West, a realm separate from the online world in both its content (being full of pornography and pedophiles) and its processes and structures (being both technically very complex and seemingly able to elude the grasp of national jurisdictions).

But in thinking about what's new, three critiques of such technologically determinist perspectives are important. First, technologies such as the Internet are far from pure bundles of hardware and wires—rather, they are socio-technical systems that have been designed, planned, regulated, and implemented in particular cultural-economic contexts, and these help shape what we think "the Internet" is (Selwyn, 2012). Second, when we talk of the dangers of "the Internet," we are often not referring to the technology itself but rather how people use it—people design and spread viruses, or post pornography on websites, or seek to groom children. Third, as is implied in both these critiques, gaining mass access to the Internet is not the only recent change in an otherwise stable reality, for accompanying every stage in the Internet's diffusion are the social processes of innovation, design, marketing, distribution, regulation, adoption, and appropriation. And it may be any or all of these processes, not just the technology, that really explains why e-learning has taken off but e-participation is struggling, or why online pornography is now commonplace but online grooming remains rare. Interestingly, while many of the social actors shaping the power and potential of the Internet are influential organizations in their own right—governments, major corporations, systems of health care or education or city planning—ordinary householders also have a role to play. And recognizing the role of children

and parents in shaping what the Internet is and could be is part and parcel of the same research project that aims to map the opportunities and risks it affords. Indeed, these different roles are complementary in complex but fascinating ways: for example, the more that parents oversee children's Internet safety, the less need for government top-down regulation; the more creatively children find online workarounds, the more canny must designers be in managing the online experience.

However, this is not to say that the Internet, as socially shaped and used in our lives, is neutral or even irrelevant in explaining the conditions of contemporary childhood. To grasp its role, the concept of affordances is helpful—this alerts us not to the intrinsic features of an object but to the meaningfulness of certain features as we particularly perceive them: unlike a glass of water, a hot cup of tea is thirst-quenching for me but not for my cat; a French film affords pleasure to me but not to my monoglot daughter; and a social networking site affords a chance for intimacy to my daughter but a chance for abuse to a pedophile. In short, to understand any object, especially complex communication technologies, we must seek to understand the specific interaction between the character of the technology and that of the user. It is the dynamic of technology-in-use that matters. Furthermore, such use is not to be understood in terms of the individual; it is fundamentally social. My daughter does not social-network alone. A film is not made in French if no one speaks the language. The affordances of the technology are locked in mutual determination with the wider circuit of culture—encompassing production, distribution, and consumption. And here questions of culture, economy, and inequality enter. My daughter social-networks in a world with many actual friends, vast numbers of potential friends, and a few pedophiles. Unless they are native speakers, people generally need access to education in order to learn French.

To be sure, as danah boyd (2008) and others have persuasively argued, the Internet's affordances matter in modern societies—adapting boyd's list, we can point to the importance of *persistence* (content is recorded, always visible, difficult to erase), *scalability* (simple interactions can be rapidly made available to vast audiences), *asynchronicity* (enabling interaction management), *replicability* (permitting seamless editing and manipulation of content), *searchability* (both extending and permitting specialization within networks of information and relationships), *audience uncertainty* (regarding who is listening and who is speaking), and *collapsed contexts* (absence of conventional boundaries for social situations, a key consequence being blurring of the public and private domains) (Livingstone, 2013a). All this, research is now revealing, is sustaining a highly immersive networked culture of expressivity, sociality, and competing information sources, with many implications for ways in which children live their lives. But to understand the array of online opportunities and risks afforded

to children or, more important, the actual benefits and harms that they experience, we must inquire into the social shaping and social consequences of Internet use-in-context (Bakardjieva, 2005; Lievrouw & Livingstone, 2006). That requires multidimensional research—preferably multidisciplinary, multimethod research. Any answers will be provisional, and any normative recommendations will be context-dependent. After all, it is one thing to ask whether children are adversely affected by exposure to online pornography or bullying; it is more complex to ask whether the fact that such exposure occurs via the Internet really makes a difference, recognizing that pornography and bullying have always existed, inserting themselves into children's lives in different ways depending on the cultural and media environment of the times. Research is making some headway in relation to these questions (for recent reviews, see Gasser, Maclay, & Palfrey, 2010; Hasebrink, Livingstone, Haddon, & Ólafsson, 2009; Palfrey, boyd, & Sacco, 2008; OECD, 2011), but there is much more to do.

Online Risks: From Fears to Findings

Reliable data on the incidence of online risk encountered by children are surprisingly hard to find—and, as the EU Kids Online network discovered when designing a survey to answer this basic question, it is also hard to produce. The Safer Internet Program of the European Commission had funded our network of some 100 multidisciplinary researchers in 25 countries to ask children about online risk in the most conscientious way we could. After much consultation with child welfare and survey design experts, we determined on interviewing children where they would be most relaxed—at home, but with as much privacy from both parents and the interviewer as could be managed. Questions were presented either on a page that the child could put in a self-sealed envelope or on a computer screen turned to the child; interviewers were on hand to explain anything tricky to understand, and they also did their best to encourage parents to leave the room. A number of ethical issues inevitably arose, since researchers should not introduce new ideas to the child (for instance, asking about pornography when a child hadn't heard of this before), and nor should they promise unconditional confidentiality, lest they learn that a child was in danger and be unable to intervene. Given these and related issues, the network decided to interview 9- to 16-year-olds (on the assumption that younger children would require a different approach) about a range of risks (phrased in ordinary, descriptive language) that they may have experienced in the recent past (without directly asking about the present).

In both its breadth and depth, as well as in the fact that it addressed detailed searching questions of Internet use directly to 9- to 16-year-old

children, this survey provides a unique and unprecedented insight into the nature of children's online experience. In terms of theory, we trace the path of children's online experiences from Internet use (amount, devices, location) through online activities (opportunities, skills, risky practices) to the risks encountered online and then the outcomes experienced (whether harmful or not, how children cope). Crucially, we recognize that because not all children encounter risk and not all risks result in harm, research must identify the protective factors (e.g., coping) that reduce the likelihood of harm and the risk factors that increase it. Last, in order to inform evidence-based policy, the study has—from inception to interpretation of findings—been conducted in dialogue with policymakers (Livingstone, 2013b). To start, however, we had to define *risk* and, also surprisingly, this was not obvious. The media headlines scream about pornography and pedophiles. But evidence of cyberbullying also is rising. And some qualitative research suggested new or neglected risks—visiting suicide sites, for example. One of our earliest and most effective contributions, therefore, which was widely taken up by policymakers, was to classify risk in a manner that gave clarity and order to the otherwise inchoate set of fears that shifted every time the media discovered a new and tragic case (see Table 8.1). It was particularly important to us as child-centered researchers to complicate the roles that children themselves could play in relation to risk—not simply as victims but, in various ways, as receivers, participants and actors, sometimes as both perpetrator and victim, and often as something more ambiguous—especially in the days of Web 2.0 and user-generated content. Challenging the simple vision of the innocent child is important: children are often reluctant to seek help for anything that worries them online precisely because their own participation will thereby be revealed, and then they fear punishment for tarnishing their "innocent" image.

The purpose of the survey, then, was to put some numbers to the cells. We didn't ask about all the risks in the survey, but for those we did ask about, the incidence reported by 9- to 16-year-olds (note that we asked only the 11- to 16-year-olds about racism, "sexting," harmful user-generated content, and data misuse) were lower than many had feared. Based on incidence, policymakers should focus less on bullying than on sexting, and not only on pornographic content but also on other potentially harmful user-generated content—pro-anorexia sites, for instance. In what follows, limitations of space permit only a short summary of key findings. These present the findings across all 25 European countries; interestingly, although the incidence of risk varies (Livingstone, Haddon, Görzig, & Ólafsson, 2011), the factors that differentiate among children, and the patterning of variables that predict who encounters more or less risk, proved to be strikingly similar across countries (Livingstone, Haddon, & Görzig, 2012).

Table 8.1 **Risks Relating to Children's Internet Use (Exemplars Only)**

	Content Receiving mass-produced content	***Contact Participating in (adult-initiated) online activity***	***Conduct Perpetrator or victim in peer-to-peer exchange***
Aggressive	Violent / gory content	Harassment, stalking	Bullying, hostile peer activity
Sexual	Pornographic content	"Grooming," sexual abuse or exploitation	Sexual harassment, "sexting"
Values	Racist / hateful content	Ideological persuasion	Potentially harmful user-generated content
Commercial	Embedded marketing	Personal data misuse	Gambling, copyright infringement

Sexual Content

Society has long worried about children's exposure to sexual content of one kind or another, and research in recent years has begun to examine exposure online as a particular focus (Lenhart, 2009; Peter & Valkenburg, 2009; Wolak, Mitchell, & Finkelhor, 2007). Key findings from the EU Kids Online survey are shown in Box 8.1.

What are the policy implications of these findings? Although public concern over online sexual content is justified, the extent of children's exposure should not be exaggerated, nor should it be assumed that all children are upset or harmed by such exposure—the present findings do not support some of the moral panics surrounding this issue. Although the Internet makes sexual content more readily available to all, with many children reporting exposure via accidental pop-ups, the regulation of more established media (television, video, magazines, etc.) remains important. Private access also matters—children who go online via their own laptop, mobile phone or, especially, a handheld device are more likely to have seen sexual images or received sexual messages. Similarly, those who go online in their bedroom, at a friend's house, or "out and about" are more likely to see sexual content online. The advice from the early days of the Internet, namely that parents should put the computer in a public room, should be revised now that many children have personal and mobile devices, and thus new safety tools and guidance are needed. Perhaps most important, the high public concern over teenage boys' supposedly deliberate exposure to sexual content tends to eclipse attention to other problems. These include the distress that inadvertent exposure to pornography and violent content may cause girls (and some boys), younger children, and those facing psychological difficulties in their lives (Livingstone, Kirwil, Ponte, & Staksrud, in press).

Box 8.1 **Children's Exposure to Sexual Content Online and Offline**

- Children encounter pornography online and offline: 14% of 9- to 16-year-olds have seen sexual images online, and 4% (that is, about 25% of those who had seen an image) were upset by this. However, 23% of 9- to 16-year-olds have seen sexual images whether online or elsewhere: for example, 12% have seen them on television or on videos or DVDs, and 7% have seen them in magazines or books.
- A minority of online content is sexually explicit—among 11- to 16-year-olds, 11% have seen nudity, 8% have seen someone having sex, 8% of seen genitals, and 2% have seen violent sex. Also, 2% have been asked to talk about sexual acts with someone online, and 2% have been asked for an image of their genitals.
- Sexual content is not just found on websites but is now circulated among peers: 15% of 11- to 16-year-olds have received sexual messages, and 4% (about 25% of those who had received a message) said they had been upset by this. Also, 3% say they have sent sexual messages to someone.
- Age and gender make a difference: older more than younger children report exposure to sexual content, and more boys than girls have seen sexual images; a third of teenage boys say they have seen these, with a quarter of teenage boys having seen them online. Vulnerability also matters—those who report more psychological difficulties are also more likely to have seen sexual images or received sexual messages online, and they are more often upset by the experience.
- Risks migrate: those who have encountered a range of risks offline are more likely to encounter sexual content online. However, risk and harm are not the same: older children and boys encounter more sexual content, but younger children and girls are more upset when they encounter this. Also, children who score highly on "sensation seeking" encounter more content and yet are less upset about it—possibly the very act of seeking and finding new content builds resilience for some.
- Parents are insufficiently aware of their children's exposure to sexual content: among children who have seen sexual images online, 40% of their parents are unaware of this. Among the groups more upset by what they see, that is, among girls and younger children, half of their parents are unaware that they have had such an experience. Relatedly, among children who have received sexual messages, 52% of their parents are unaware of this, and again this is more common among parents of girls and younger children.

Online Bullying

Building on growing concerns about cyberbullying, and bearing in mind debates over definitions (and problems of translation, since the term *bully* does not exist in many languages), the EU Kids Online survey asked children whether they had been treated, or had treated other people, in a hurtful or nasty way on the Internet, whether as a single, repeated, or persistent occurrence (see also Patchin & Hinduja, 2012; Smith, Mahdavi, & Carvalho, 2008; Vandebosch & Cleemput, 2009). Key findings are summarized in Box 8.2.

Notably, although relatively few children report being bullied, this is the risk that upsets them most, more than sexual images, sexual messages, or meeting online contacts offline. Hence the policy implications are pressing. In countries where there is more bullying, there tends to be more bullying online. This suggests that as Internet use increases, so will bullying online. Thus antibullying initiatives should accompany efforts to promote Internet use. Online and offline bullying should be seen as connected, part of a vicious cycle in which perpetrators reach their victims through diverse means and victims find it hard to escape. Yet, those who bully may also be vulnerable, and they are often victims themselves, so sensitive treatment is required. Although children have a range of coping responses, this risk does upset them, and more support is needed—fewer than half tell a parent or other adult, and fewer than half know how to block the person or delete their messages, so further awareness-raising is vital.

Meeting New Contacts Online

Communicating, making new friends, developing intimacy—all this is fraught with difficulties and embarrassment for young people. The Internet, it seems, offers a space for privacy, control over communication, and experimentation. It also lets children easily get to know many new people, whether like themselves or quite different. Traditionally, in face-to-face encounters, it has been clear who children are in touch with because (1) children can see who they are talking to; (2) parents can oversee who the child is talking to; and (3) the child's own identity is not in doubt. But on the Internet, none of this can be assumed: online, famously, no one knows whether you are a dog—or a child; nor is it clear whether you are talking to a child or an adult, or an adult pretending to be a child. No longer can parents oversee their children's friends—they are no longer present in the house or on the street, only on the computer, often inaccessible even to curious or concerned parents. Unsurprisingly, then, nowhere has the public anxiety been greater than over the tension between "meeting strangers" (as many adults see it) and "making new friends"

Box 8.2 **Children's Exposure to Bullying Online and Offline**

- Among 9- to 16-year-old Internet users, 6% report having been bullied online and 3% confess to having bullied others. Far more have been bullied offline, however, with 19% saying they have been bullied at all—and 12% saying they have bullied someone else. In some countries, bullying is much more common than in others.
- Offline and online bullying are closely related. About half (56%) of online bullies said they had also bullied people face-to-face, and about half (55%) of online victims said they have also been bullied face-to-face. So it is not the case that bullying takes place either online or offline, but rather that bullying migrates from one domain to the other, making it hard for the victim to escape.
- Bullying and being bullied tend to go together. Among those who do not bully others, being bullied is relatively rare: 8% of children experienced offline bullying only and 4% experienced online bullying. But, among those who have bullied others offline, nearly half have also been bullied offline (and fewer online). On the other hand, among those who have bullied others online, nearly half have been bullied online (and fewer offline).
- Which children bully or are bullied? Children who bully and who are bullied online report rather more psychological difficulties than children with no experience of bullying online. Also, those who bully tend to be higher in sensation seeking, while those who are bullied are more often ostracized by their peers.
- As for the question of harm, the 6% of children who have been bullied online divide fairly evenly into those who were very upset (31%), fairly upset (24%), a bit upset (30%) and, the smallest category, not at all upset (15%). Girls experience feeling more upset than boys (37% vs. 23% "very upset").
- Children have some resources at their disposal to cope with being bullied online: about one-third (36%) try to fix the problem, most tell someone (77%, usually a friend but often a parent), and nearly half (46%) block the person sending the hurtful messages.

(as children may see it). Meeting strangers is a risk. Making new friends is an opportunity. Distinguishing between the two may depend on the child and the circumstances. Avoiding the emotionally charged terms *stranger* and *friend,* we asked children in the survey about the people they are in touch with online and whether they also know them offline (see Box 8.3).

Box 8.3 **Children's Exposure to New Contacts Online and Offline**

- Among 11- to 16-year-olds, 87% say that online they are in touch with people they first met face-to-face; 39% are in touch with people they met on the Internet who are friends or family of people they know; and 25% are in touch with people they met online who have no connection with their existing social circle.
- Among European 9- to 16-year-olds, 30% have had contact online with someone they haven't met face-to-face, but only 9% have gone to an offline meeting with such a person. • Among those children who have met online contacts offline, half have met one or two people in the past year, and half have met more. Also, 57% met a friend of a friend (someone in their social circle), while 48% met someone unconnected with their life before meeting them online.
- Among those children who did meet an online contact offline, 61% of their parents were not aware of this, rising to 68% among the younger children. Parents were least aware of such meetings in Ireland, the UK, Cyprus, and Portugal.
- Several factors predict who makes contacts online: being higher in self-efficacy or sensation seeking; engaging in risky online and offline activities; and having parents who place fewer restrictions on the child's Internet use. Interestingly, those who go to meet new contacts offline show a similar pattern, except they are also more likely to have psychological difficulties, so children's vulnerability is part of what makes some go to face-to-face meetings with "new friends."
- Among those children who went to offline meetings with contacts made online, 11% (i.e., 1% of all children surveyed) were bothered or upset by what happened—the vast majority, then, were not upset by such meetings. For ethical reasons, the survey didn't ask much about what happened, though we know that two-thirds of those upset met someone about their own age; a fifth said something hurtful was said and a few said something sexual happened. The findings also showed that those who were upset were more likely to be younger, lower in self-efficacy and higher in psychological difficulties—in short, they tended to be the more vulnerable children.

Meeting new people online is now commonplace for young people, and only in a small minority of cases is there cause for serious concern. From the perspective of policymakers, it is therefore important to distinguish the common occurrence of making new online contacts from the less common occurrence of actually going to meet them. It is equally important to recognize that for

the most part, meeting online contacts is harmless, probably even fun. But for a minority of children, meeting online contacts is harmful, and these children tend already to be the more vulnerable. Because their parents are often unaware of what has happened, awareness-raising efforts should be increased so that parents of younger or otherwise more vulnerable children recognize the risk, without undermining the chance for most children to have fun making new friends.

Newer Risks

Public anxiety often focuses on pornography, sexting, bullying, and meeting strangers, especially for young children. But there are other risks that worry children, including many teenagers, as illustrated in Box 8.4.

Survey findings showed in particular that negative user-generated content is becoming common: 12% of 11- to 16-year-olds have seen hate sites in the past year; 10% have seen pro-anorexic sites, and among 14- to 16-year-old girls, the rate rises to about one in five; 7% have seen self-harm sites; 5% have seen drug

Box 8.4 **What Upsets Children on the Internet (Examples)**

- "When somebody says that he/she is going to commit suicide" (boy, 15, Germany)
- "Girlfriends, who I thought were my friends, have been awful. They took my identity to have my boyfriend." (girl, 15, France)
- "Bloodthirsty websites that show how someone is beating himself bloody or how someone is scratching himself" (girl, 15, Austria)
- "Showing sexual practices, offering drugs and weapons, religious groups" (boy, 15, Czech Republic)
- "When human beings are killed; when human beings are hurt while other people are watching" (girl, 10, Germany)
- "Torturing ourselves, attempts at suicide, using drugs" (boy, 15, Hungary)
- "Pictures of naked people and of people who want to lose weight very quickly" (girl, 10, Portugal)
- "Somebody that would 'crack' my password, I mean to access my account, to impersonate me and to make people in my contact list believe that I'm lying to them etc." (girl, 12, Romania)
- "The influence of bad websites such as things like diet to lose weight so you could be known as the pretty one. Like vomiting things" (girl, 15, Ireland)

sites; and 5% have seen suicide sites. In all, one in five 11–16 year olds have seen one or more of these kinds of sites. It is, therefore, vital to listen to children to learn what new risks they are experiencing. Addressing risks associated with peer-to-peer conduct (user-generated content and personal data misuse) poses a critical challenge to policymakers. While younger children have fewer resources to cope with online risk, the evidence shows that they are also more willing to turn to parents for help; meanwhile, teenagers face particular risks that worry them and that they may struggle with alone, so they need particular coping strategies and support.

What's the Harm?

Risk, as framed by the mass media, seems inherently a "bad thing" (Mascheroni, Ponte, Garmendia, Garitaonandia, & Murru, 2010). But risk, as defined by risk theorists, refers to the likelihood of harm, and this likelihood may be very low (Klinke, Dreyer, Renn, Stirling, & Van Zwanenberg, 2006). In short, policymakers need to know the likelihood of harm, which is rarely 100%; they also need to know the magnitude or severity of the potential harm, for this is rarely devastating, although it can be. In the EU Kids Online survey, four in ten children said they had encountered one or more of the risks we asked about, but only one in eight said they were bothered or upset by something online. Admittedly, with children it is hard to measure actual harm, especially in a survey. But if we do not try, we may reinforce the misinterpretation of risk as harm—i.e., that the mere exposure to pornography or to bullying messages, or the mere fact of meeting an online contact offline, becomes in itself a measure of harm. Here the popular analogy of comparing safety on the Internet to safety on the roads (Criddle, 2006) goes awry, because sad to say, we know not only how many kids have road accidents each year—in the UK, it's about 40,000—but we also know how many are killed (about 300) (Madge & Barker, 2007). But online, we tend to report the figures for "accidents," as it were, without knowing whether and when kids pick themselves up and turn out to be just fine—or not. So on the Internet, we tend to confuse the higher numbers who are exposed to the risk (which we can measure) with the presumably-lower numbers who actually experience harm (which we have not measured well so far). Hence the public anxiety. Assessing whether a child is damaged in the long term by exposure to pornography or bullying is a hard challenge for future research.

In our survey, given our child-centered approach, we took just one small step in this direction by asking the kids for their perspective. We found that for the main risks we asked about, as noted above, among those who had encountered the risk, the incidence of some degree of upset—arguably, of harm—was

relatively low. Most children claimed to be fine with seeing pornography or meeting so-called strangers—who usually turned out to be another child in their community. Bullying, however, was generally not fine. Moreover, the patterns among children are interesting. Generalizing across risks, we have found that children who are older, who are higher in self-efficacy and sensation seeking, who do more online activities, and who report more psychological problems encounter more risks of all kinds online. By contrast, children who are younger, who are lower in self-efficacy and sensation seeking, who do fewer online activities, have fewer digital skills, or who have more psychological problems are more likely to be upset by the risks that they encounter. In other words, kids who are vulnerable to harm may or may not be those especially likely to encounter risks online. Indeed, our analysis of protective and vulnerability factors strongly suggests that kids who are vulnerable offline are more likely to be vulnerable online—if they encounter the risks in the first place, that is. It is hard to communicate to policymakers, however, that the conditions that increase risk differ from those that increase harm.

To be sure, this is just a beginning, for in trying to understand harm (and, then, vulnerability), we are limited to what children tell us at the time—though this has its own value—as illustrated by the quotations in Box 8.4. But the risk theorists would require us next to measure the magnitude as well as the likelihood of harm—here the story of meeting online contacts offline might tell a different and a more worrying story for the small minority who report being upset (Finkelhor, 2008), not to mention the long-term consequences of serious or repeated exposure to risk. So that's a priority for future research, if it can be done. The point is this: to report that 14% of European kids have seen sexual images online is an important part of the picture (after all, it isn't the 100% so often feared), but even this figure does not report the risk of harm itself; rather, it reports the "risk of the risk," where the harm itself remains elusive (and in need of further research).

But there is scope for further complication. On the roads—and elsewhere in their lives, it seems—children live in an increasingly risk-averse culture (Gill, 2007). Adults today, it seems, carry with them a picture in their minds of the freedoms they enjoyed in their locality that today's children are denied. Indeed, a focus on risk seems to ignore the benefits of Internet use, and living in a risk-averse culture (with phones and Facebook often banned in school and with parents anxiously watching over the child's shoulder at home) means that the Internet is a pretty restricted place for many children. Since in reality only a small minority of children upload as well as download, create as well as receive, or explore freely beyond Google, Facebook, and YouTube (Livingstone & Helsper, 2007), society still faces the significant task of maximizing the opportunities of the Internet for children as well as in minimizing its risks (or, better, in minimizing harm).

Moreover, many activities fall into a gray area between risks and opportunities—the Internet affords, indeed, risky opportunities. In our survey, half of 11- to 16-year-olds say, "I find it easier to be myself on the Internet than when I am with people face-to-face," and this may help explain why, further:

- 40% of 9- to 16-year-olds have "looked for new friends on the Internet";
- 34% have "added people to my friends list or address book that I have never met face-to-face";
- 16% have "pretended to be a different kind of person on the Internet from what I really am";
- 15% have "sent personal information to someone that I have never met face-to-face"; and
- 14% have "sent a photo or video of myself to someone that I have never met face-to-face."

This is partly a matter of Internet design—to post content online, you must provide personal details; to make new friends you must contact "strangers"; to explore widely may expose you to inappropriate content; to seek guidance on your diet may lead to healthy or pro-anorexic advice. Navigating all this is a challenge for adults as well as children—and this doesn't simply reflect our lack of digital literacy, or theirs, but also the fact that most of the Internet is designed for commercial purposes—it is far from a trustworthy, accountable, and enabling sphere designed for the public good. But it is also the case that these kinds of ambiguous "risky opportunities" allow children to experiment online with relationships, intimacy, and identity. This is vital for growing up if children are to learn to cope with the adult world. But risky opportunities are linked to vulnerability as well as resilience. In pursuing why some children undertake these risky online activities, analysis revealed that several influential factors – as predicted by a range of hypotheses (Livingstone, Haddon, & Görzig, 2012). Specifically, the following groups of children were more likely to engage in risky online activities:

- Children who were older, male, or higher in self-efficacy (Schwarzer & Jerusalem, 1995) and sensation seeking (Stephenson, Hoyle, Palmgreen, & Slater, 2003).
- Children who used the Internet in more places, for longer, and for more activities, as predicted by the hypothesis that more use makes for more opportunities but also more risks (Livingstone & Helsper, 2010).
- Children who encountered more offline risks (e.g., say "yes" to "Had so much alcohol that I got really drunk," "Missed school lessons without my parents knowing," "Had sexual intercourse," "Been in trouble with my teachers for bad behavior," "Been in trouble with the police"), as predicted by the hypothesis that offline risks migrate online (Livingstone, Haddon, & Görzig, 2012).

- Children with more psychological difficulties, as predicted by the hypothesis that those vulnerable offline will also be vulnerable online (Livingstone, Haddon, & Görzig, 2012).
- Children who said it is "very true" that "I find it easier to be myself on the Internet," as predicted by the hypothesis that people seek online to compensate for the social problems they suffer offline (Valkenburg & Peter, 2009).
- Children with more digital literacy and safety skills, suggesting that online experimentation can enhance skills, though greater skill is also linked to more (not fewer) online risky activities.

Unsurprisingly, then, our research shows that risks and opportunities tend to go hand in hand—more risk is associated with more opportunity, and vice versa (Livingstone & Helsper, 2010), which poses a challenge for policymakers seeking to change the balance between the two. Yet it is unsurprising when we think of, say, teaching children to cycle on the roads: there, too, more skill leads to more opportunities but also more risk. Challengingly, though, this means that initiatives to improve digital skills appear to increase not only the opportunities but also the risks (although perhaps not the harm). Last, a world without risk is undesirable. Children must learn to face the unexpected, to take calculated risks and, within reason, to cope when things go wrong. Developmental psychologists are clear—without facing some degree of adversity, children do not become resilient (Schoon, 2006) and, although safety remains important, it is as important, or even more important, to empower children to become confident and resilient in exploring their world and seeking out its benefits.

Conclusion

In this chapter, I have presented the main findings and policy recommendations that emerge from the EU Kids Online project, focusing on the relation between opportunities, risk, and harm. Although both research and policy have tended to treat these as separable parts of children's experience, the two are inextricably intertwined. The evidence shows that as use of the Internet increases—at the level of individuals and countries—so too does risk. However, fewer children report being harmed by online risks. Being bullied online is the risk that upsets children the most, even though it is among the least common. Meeting new people offline—the risk that the public worries about the most—very rarely upsets children, although when it does upset them the consequences can be very serious. While society may judge, on moral grounds, that children should not be exposed to sexual content, children are only upset by such exposure in a few circumstances, while in others such exposure may be pleasurable. Moreover, as discussed above, research has made

some progress in identifying the factors that help explain which children are likely to encounter online risk and for which children this may be experienced as harmful.

In short, I have argued that it is unrealistic to consider how children can learn from the Internet or participate online without also considering the risks that such activities may bring with them, often inadvertently. Similarly, it is inappropriate to seek strategies for reducing the risks that the Internet poses to children without recognizing that some strategies may—often also inadvertently—result in curtailing children's online freedoms. It is vital, therefore, that children's Internet use is understood in the round, neglecting neither the risks nor the opportunities nor, indeed, the practicalities of internet use in everyday contexts.

Certainly it is too simple to call for restrictions on children's use of the Internet. But ways must be found to manage risk without unduly restricting opportunities. As with riding a bike or crossing the road, everyday activities online carry a risk of harm, but this harm is far from inevitable—indeed, it is fairly rare. The EU Kids Online survey provides clear empirical support for policy efforts both to manage children's encounters online so as to reduce harm (though not necessarily to reduce risk). This should be achieved both by designing the online environment to build in safety considerations and to increase children's digital skills, coping, and resilience. In some countries, the need for such efforts is already pressing. In others, it may be anticipated that as use rises, so too will the need for greater policy efforts regarding children's safety, empowerment, and well-being.

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